Claims

1. Device (1; 11; 21; 31) for sealing a puncture in a vessel, comprising a sealing element (2; 12; 22; 32) configured to be placed against a wall of the vessel and to seal the puncture in the vessel by contacting the vessel wall, and an elongated member (3; 13; 23; 33) connected to the sealing element and configured to extend in an incision canal leading to the puncture in the vessel, **characterized in** that the elongated member has a diameter that is small, less than 25%, preferably less than 10%, in comparison to the diameter of the sealing element and comprises a haemostatic material.

2. Device (1) according to claim 1, **characterized in** that the elongated member at least partly is in the form of a suture, filament or multifilament.

3. Device (1) according to claim 1, **characterized in** that the sealing element (2) is adapted to be positioned against an inner surface of the vessel wall and is held in place by the elongated member (3).

4. Device (11) according to claim 1, **characterized in** that the sealing element (12) is adapted to be positioned against an inner surface of the vessel wall, and that the device (11) further comprises a locking element (14) connected to the elongated member (13) and adapted to be positioned against an outer surface of the vessel wall.

5. Device (11) according to claim 4, **characterized in** that the locking element (14) comprises a haemostatic material.

6. Device (21) according to claim 1, **characterized in** that the sealing element (22) is in the form of plug (22), which is adapted to be positioned against an outer surface of the vessel wall, and that the device (21) further comprises an anchor member (24) connected to the elongated member (23) and adapted to be positioned against an inner surface of the vessel wall.

7. Device (21) according to claim 5, **characterized in** that the plug (22) comprises a haemostatic material.

8. Device (31) according to claim 1, **characterized in** that the sealing element (32) is adapted to be positioned against an inner surface of the vessel wall, and that the device (31) further comprises a second sealing element (34), which is adapted to be positioned against an outer surface of the vessel wall and is provided with saw-teeth that fit into corresponding recesses provided on a portion of the elongated member (33) that extends through the second sealing element (34).

9. Device (31) according to claim 8, **characterized in** that the second sealing element (34) comprises a haemostatic material.

10. Device according to anyone of the claims 1 to 9, **characterized in** that the haemostatic material is a core of the elongated member.

11. Device according to anyone of the claims 1 to 9, **characterized in** that the elongated member is coated with the haemostatic material.

12. Device according to anyone of the claims 1 to 9, **characterized in** that the elongated member is impregnated or soaked with the haemostatic material.

13. Device according to anyone of the claims 1 to 12, **characterized in** that the elongated member is a multifilament comprising several filaments, each of which is coated with the haemostatic material.

14. Device according to anyone of the claims 1 to 13, **characterized in** that the haemostatic material is selected from the group comprising collagen, chitin and chitosan, thrombin, gelatine, oxidized regenerated cellulose, aprotinin, tranexamic acid, aminocaproic acid, desmopressin, vitamin K, factor VIIa, factor VIII, vasopressin, and conjugated oestrogen, or combinations thereof.

15. Method for sealing a puncture in a vessel, in which a sealing element (2; 12; 22; 32) is positioned in contact with a wall of the vessel to seal the puncture therein and is held in place by an elongated member (3; 13; 23; 33) connected to the sealing element (2; 12; 22; 32) and configured to extend in an incision canal leading to the puncture in the vessel, **characterized in** that the elongated member comprises a haemostatic

material and that the elongated member has a diameter that is small, less than 20%, in comparison to the diameter of the sealing element.

16. Method according to claim 15, **characterized in** that the elongated member is a suture, filament or multifilament.

17. Method according to claim 15 or claim 16, **characterized in** that the haemostatic material is selected from the group comprising collagen, chitin and chitosan, thrombin, gelatine, oxidized regenerated cellulose, aprotinin, tranexamic acid, aminocaproic acid, desmopressin, vitamin K, factor VIIa, factor VIII, vasopressin, and conjugated oestrogen, or combinations thereof.